Random Activation of Gene Expression (RAGE)

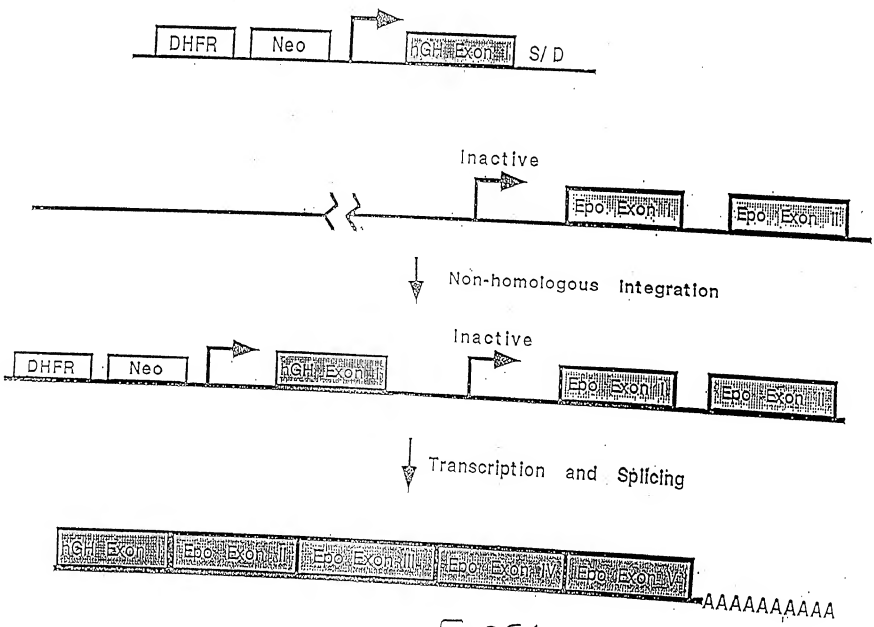


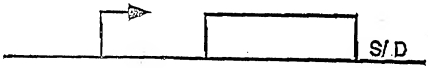
FIGURE 1

Activation Constructs without Translation Start Codons

Construct #

1

2

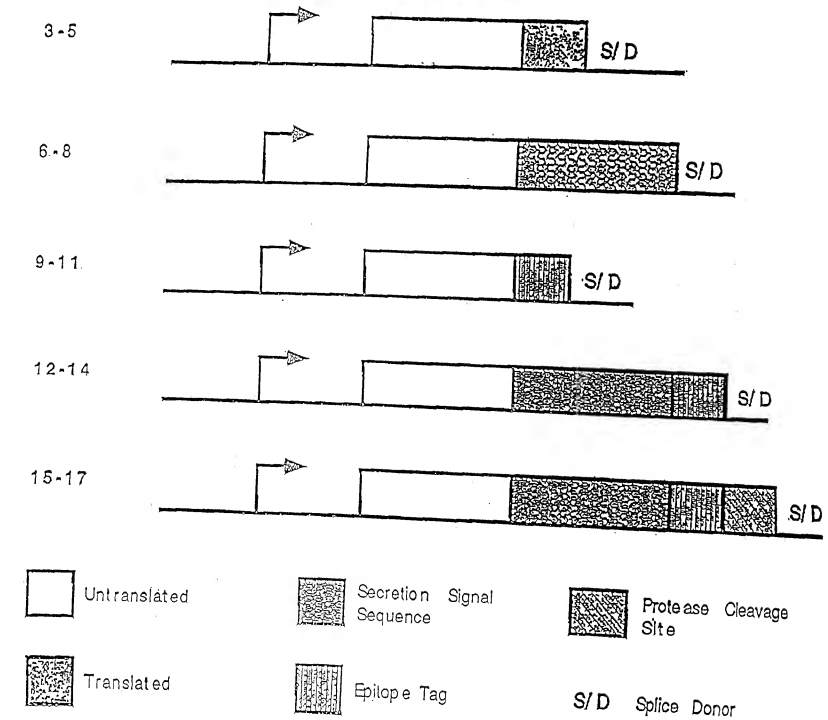


Untranslated

S/D Splice Donor

FIG. 2

FIG. 3


Construct #
3-5
S/D
6-8
S/D
9-11
S/D
12-14
S/D
15-17
S/D
Untranslated
Secretion Signal Sequence
Protease Cleavage Site
Translated
Epitope Tag
S/D Splice Donor

pRIG-1

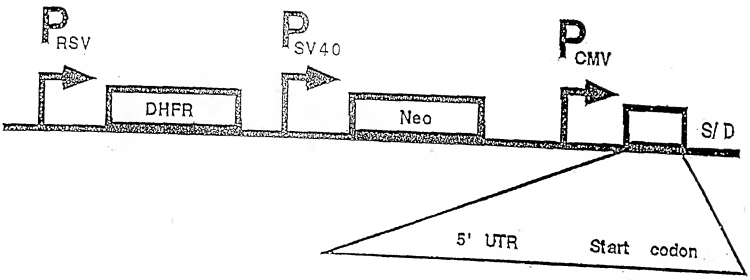


Fig. 4

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCATA
CGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCG
CCATGTTGGCATTGATTATTGACT
AGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGT
TCCGCGTTACATAACTTACGGTAAA
TGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACG
TATGTTCCCATAGTAACGCCAATAG
GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGC
AGTACATCAAGTGTATCATATGCCA
AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCC
AGTACATGACCTTACGGGACTTTCC
TACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTT
GGCAGTACACCAATGGGCGTGGAT
AGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGG
GACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGGG
CGGTAGGCGTGTACGGTGGGAGGTC
TATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCGG
TAGTTTATCACAGTTAAATTGCTAA
CGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT
AATTAACTCCACCAGTCTCACTTCA
GTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGAA
TCAAAAGAGGAAACCAACCCCTAA
GATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCTT
CCAAAGGTGCAGTCTCCAAAGAGA
TTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACAT
TCCTAGTTTTCAAATGAGTGATGAT
ATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA
GAAAAGAGAAAGAGACTTTCAAGGA
AAAAGATACATATAAGCTATTTAAAAATGGAACTCTGAAAATTAAGCATCTGAAG
ACCGATGATCAGGATATCTACAAGG
TATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGAA
GATTCAAGAGAGGGTCTCAAAACCA
AAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGAA
CTGACCCCGAATTAAACCTGTATCA
AGATGGGAAACATCTAAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCACC
AGCCTGAGTGCAAAATTCAAGTGCA
CAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTCGAGCCTGTCAGCTGTCCAG
AGAAAGGGATCCAGGTGAGTAGGGCC
CGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTTAA
GGAGACCAATAGAAACTGGGCTTGT
CGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCGGCC
GCGAATTCCAAGCTTGAGTATTCTA
TCGTGTCACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTGAA
ATTGTTATCCGCTCACAATTCCACA
CAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTGAG
CTAACTCACATTAATTGCGTTGCGCGATGCTTCCATTTTGTGAGGGTTAATGC-

Figure 5A

TTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACAAGAAT
GCAGTGAAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA
CCATTATAAGCTGCAATAAACA
AGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAGGGGGAGATGTGG
GAGGTTTTTTAAAGCAAGTAAAACC
TCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT
GGACGCGCCCTGTAGCGGCGCATTA
AGCGCGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCC
TAGCGCCCGCTCCTTTCGCTTTCTTC
CCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTCAAGCTCTAAATCGGGGGC
TCCCTTTAGGGTTCCGATTTAGTGC
TTTACGGCACCTCGACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGG
CCATCGCCCTGATAGACGGTTTTTC
GCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTGG
AACAACACTCAACCCTATCTCGGTC
TATTCTTTTGATTTATAAGGGATTTTGCCGATTTCGGCCTATTGGTTAAAAAATGA
GCTGATTTAACAAAAATTTAACGC
GAATTTTAACAAAATATTAACGCTTACAATTTCGCCTGTGTACCTTCTGAGGCGG
AAAGAACCAGCTGTGGAATGTGTGT
CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGC
ATGCATCTCAATTAGTCAGCAACCAG
GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCT
CAATTAGTCAGCAACCATAGTCCCGC
CCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCC
CCATGGCTGACTAATTTTTTTTATT
TATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGGA
GGCTTTTTTGGAGGCCTAGGCTTTTG
CAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCA
TGATTGAACAAGATGGATTGCACGC
AGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAG
ACAATCGGCTGCTCTGATGCCGCCG
TGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTC
CGGTGCCCTGAATGAACTGCAGGAC
GAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTG
CTCGACGTTGTCACTGAAGCGGGAAG
GGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTT
GCTCCTGCCGAGAAAGTATCCATCA
TGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGA
CCACCAAGCGAAACATCGCATCGAG
CGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGCTCGCGCCAGCCGA
ACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGAC
CCATGGCGATGCCTGCTTGCCGAATA
TCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGT
GGCGGACCGCTATCAGGACATAGCG
TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCC
TCGTGCTTTACGGTATCGCCGCTCC
CGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGA
CTCTGGGGTTCGAAATGACCGACCAAGCGACGCCCAACCTGCCATCACGATGGC-

Figure 5B

CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAAGA
TCCGCGTA-
TGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC
ACCCGCCAACAC
CCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGC
TGTGACCGTCTCCGGGAGCTGCATG
TGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGTGA
TACGCCTATTTTTATAGGTTAATGT
CATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGC
GGAACCCCTATTTGTTTATTTTTCT
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCA
ATAATATTGAAAAAGGAAGAGTATG
AGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCC
TGTTTTTGCTCACCCAGAAACGCT
GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGA
ACTGGATCTCAACAGCGGTAAGATCC
TTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCT
GCTATGTGGCGCGGTATTATCCCGT
ATTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACT
TGGTTGAGTACTCACCAGTCACAGA
AAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACC
ATGAGTGATAACACTGCGGCCAACT
TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACAT
GGGGGATCATGTAACTCGCCTTGAT
CGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACG
ATGCCTGTAGCAATGGCAACAACGTT
GCGCAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATA
GACTGGATGGAGGCGGATAAAGTTG
CAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATC
TGGAGCCGGTGAGCGTGGGTCTCGC
GGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCT
ACACGACGGGGAGTCAGGCAACTAT
GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG
TAACTGTCAGACCAAGTTTACTCAT
ATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAAGGATCTAGGTGAAG
ATCCTTTTTGATAATCTCATGACC
AAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGA
TCAAAGGATCTTCTTGAGATCCTTT
TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTG
GTTTGTTTGCCGGATCAAGAGCTAC
CAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGT
CCTTCTAGTGTAGCCGTAGTTAGGC
CACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGT
TACCAGTGGCTGCTGCCAGTGGCGA
TAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG
CGGTCGGGCTGAACGGGGGGTTCGT
GCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGC
GTGAGCTATGAGAAAGCGCCACGCTT
CCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

Figure 5C

AGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTC
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGG
GGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTT
TTGCTGGCCTTTTGCTCACATGGCT
CGAC3'

Figure 5D

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCAT
ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
GCCATGTTGGCATTGATTATTGAC
TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
TTCCGCGTTACATAACTTACGGTAA
ATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGAC
GTATGTTCCCATAGTAACGCCAATA
GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
CAGTACATCAAGTGTATCATATGCC
AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
CAGTACATGACCTTACGGGACTTTC
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
TTGGCAGTACACCAATGGGCGTGGA
TAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGA
GTTTGTTTTGGCACCAAAATCAACG
GGACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGG
GCGGTAGGCGTGTACGGTGGGAGGT
CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
GTAGTTTATCACAGTTAAATTGCTA
ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT
TAATTAACTCCACCAGTCTCACTTC
AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA
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AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
TCCAAAGGTGCAGTCTCCAAAGAG
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TTCCTAGTTTTCAAATGAGTGATGA
TATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTC
AGAAAAGAGAAAGAGACTTTCAAGG
AAAAAGATACATATAAGCTATTTAAAAATGGAACTCTGAAAATTAAGCATCTGAA
GACCGATGATCAGGATATCTACAAG
GTATCAATATATGATACAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGA
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ACTGACCCCGAATTAAACCTGTATC
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CAGCCTGAGTGCAAAATTCAAGTGC
ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTCGAGCCTGTCAGCTGTCCA
GAGAAAGGGATCCCAGGTGAGTAGGG
CCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTT
AAGGAGACCAATAGAAACTGGGCTT
GTCGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCGG
CCGCGAATTCCAAGCTTGAGTATTC
TATCGTGTCACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTGA
AATTGTTATCCGCTCACAATTCCA
CACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTG
AGCTAACTCACATTAATTGCGTTGCG
CGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATT
GATGAGTTTGGACAAACCACAACAAGAATGCAGTGAAAAAAATGCTTTATTTGT-

Figure 6A

GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA
CAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAGGGGGAGATGT
GGGAGGTTTTTTAAAGCAAGTAAAA
CCTCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA
ATGGACGCGCCCTGTAGCGGCGCAT
TAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTCGCTTTCT
TCCCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCCGATTTAGT
GCTTTACGGCACCTCGACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGTG
GGCCATCGCCCTGATAGACGGTTTT
TCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTG
GAACAACACTCAACCCTATCTCGG
TCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTCGGCCTATTGGTTAAAAAAT
GAGCTGATTTAACAAAAATTTAAC
GCGAATTTTAACAAAATATTAACGCTTACAATTTCGCCTGTGTACCTTCTGAGGC
GGAAAGAACCAGCTGTGGAATGTGT
GTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAA
GCATGCATCTCAATTAGTCAGCAACC
AGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCAT
CTCAATTAGTCAGCAACCATAGTCCC
GCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCG
CCCCATGGCTGACTAATTTTTTTTA
TTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGG
AGGCTTTTTTGGAGGCCTAGGCTTT
TGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCAC
CATGATTGAACAAGATGGATTGCAC
GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAAC
AGACAATCGGCTGCTCTGATGCCGC
CGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTG
TCCGGTGCCCTGAATGAACTGCAGG
ACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCTG
TGCTCGACGTTGTCACTGAAGCGGGA
AGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACC
TTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCG
AGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACG
AAGAGCATCAGGGGCTCGCGCCAGCC
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ACCCATGGCGATGCCTGCTTGCCGAA
TATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGT
GTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGC
TTGGCGGCGAATGGGCTGACCGCTTCCTCGTGCTTTACGGTATCGCCGCT
CCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGG
GACTCTGGGGTTCGAAATGACCGAC
CAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTCA
TTACATCTGTGTGTTGGTTTTTTGT
GTGAAGATCCGCGTATGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGT
TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCT-

Figure 6B

TGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCA
TGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGT
GATACGCCTATTTTTATAGGTTAAT
GTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGC
GCGGAACCCCTATTTGTTTATTTTT
CTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTT
CAATAATATTGAAAAAGGAAGAGTA
TGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTT
CCTGTTTTTGCTCACCCAGAAACG
CTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATC
GAACTGGATCTCAACAGCGGTAAGAT
CCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTT
CTGCTATGTGGCGCGGTATTATCCC
GTATTGACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGA
CTTGGTTGAGTACTCACCAGTCACA
GAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAA
CCATGAGTGATAACACTGCGGCCAA
CTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAAC
ATGGGGGATCATGTAACTCGCCTTG
ATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCA
CGATGCCTGTAGCAATGGCAACAACG
TTGCGCAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAA
TAGACTGGATGGAGGCGGATAAAGT
TGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAA
TCTGGAGCCGGTGAGCGTGGGTCTC
GCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTAT
CTACACGACGGGGAGTCAGGCAACT
ATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATT
GGTAACTGTCAGACCAAGTTTACTC
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AGATCCTTTTTGATAATCTCATGA
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GATCAAAGGATCTTCTTGAGATCCT
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TGGTTTGTTTGCCGGATCAAGAGCT
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GTCCTTCTAGTGTAGCCGTAGTTAG
GCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCT
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AGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTC
GTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACA
GCGTGAGCTATGAGAAAGCGCCACGC
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GAGAGCGCACGAGGGAGCTTCCAGGG
GGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGC
GTCGATTTTTGTGATGCTCGTCAGG
GGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGC
CTTTTGCTGGCCTTTTGCTCACATGG
CTCGAC3'

Figure 6C

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
AATATTGGCTATTGGCCATTGCAT
ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
GCCATGTTGGCATTGATTATTGAC
TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
TTCCGCGTTACATAACTTACGGTAA
ATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGAC
GTATGTTCCCATAGTAACGCCAATA
GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
CAGTACATCAAGTGTATCATATGCC
AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
CAGTACATGACCTTACGGGACTTTC
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
TTGGCAGTACACCAATGGGCGTGGA
TAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGA
GTTTGTTTTGGCACCAAAATCAACG
GGACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGG
GCGGTAGGCGTGTACGGTGGGAGGT
CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
GTAGTTTATCACAGTTAAATTGCTA
ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT
TAATTAACTCCACCAGTCTCACTTC
AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA
ATCAAAAGAGGAAACCAACCCCTA
AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
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ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACA
TTCCTAGTTTTCAAATGAGTGATGA
TATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTC
AGAAAAGAGAAAGAGACTTTCAAGG
AAAAAGATACATATAAGCTATTTAAAAATGGAACTCTGAAAATTAAGCATCTGAA
GACCGATGATCAGGATATCTACAAG
GTATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGA
AGATTCAAGAGAGGGTCTCAAAACC
AAAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGA
ACTGACCCCGAATTAAACCTGTATC
AAGATGGGAAACATCTAAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCAC
CAGCCTGAGTGCAAAATTCAAGTGC
ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTCGAGCCTGTCAGCTGTCCA
GAGAAAGGGATCCACAGGTGAGTAGG
GCCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTT
TAAGGAGACCAATAGAAACTGGGCT
TGTCGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCG
GCCGCGAATTCCAAGCTTGAGTATT
CTATCGTGTCACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTG
AAATTGTTATCCGCTCACAATTCC
ACACAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGT
GAGCTAACTCACATTAATTGCGTTGC
GCGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACAT
TGATGAGTTTGGACAAACCACAACA AGAATGCAGTGAAAAAAATGC-

Figure 7A

TTTATTTGTGAAATTTGTGATG
CTATTGCTTTATTTGTAACCATTATAAGCTGCAATAA
ACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAGGGGGAGATG
TGGGAGGTTTTTTAAAGCAAGTAAA
ACCTCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCG
AATGGACGCGCCCTGTAGCGGCGCA
TTAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
CCTAGCGCCCGCTCCTTTCGCTTTC
TTCCCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTCAAGCTCTAAATCGGGG
GCTCCCTTTAGGGTTCCGATTTAG
TGCTTTACGGCACCTCGACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGT
GGGCCATCGCCCTGATAGACGGTTT
TTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACT
GGAACAACACTCAACCCTATCTCG
GTCTATTCTTTTGATTTATAAGGGATTTTGCCGATTTCGGCCTATTGGTTAAAAAA
TGAGCTGATTTAACAAAAATTTAA
CGCGAATTTTAACAAAATATTAACGCTTACAATTTCGCCTGTGTACCTTCTGAGG
CGGAAAGAACCAGCTGTGGAATGTG
TGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAA
AGCATGCATCTCAATTAGTCAGCAAC
CAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCA
TCTCAATTAGTCAGCAACCATAGTCC
CGCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCC
GCCCCATGGCTGACTAATTTTTTTT
ATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAG
GAGGCTTTTTTGGAGGCCTAGGCTT
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CCATGATTGAACAAGATGGATTGCA
CGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAA
CAGACAATCGGCTGCTCTGATGCCG
CCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCT
GTCCGGTGCCCTGAATGAACTGCAG
GACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCTTGCGCAGCT
GTGCTCGACGTTGTCACTGAAGCGGG
AAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCAC
CTTGCTCCTGCCGAGAAAGTATCCA
TCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATT
CGACCACCAAGCGAAACATCGCATC
GAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGAC
GAAGAGCATCAGGGGCTCGCGCCAGC
CGAACTGTTCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGT
GACCCATGGCGATGCCTGCTTGCCGA
ATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGG
TGTGGCGGACCGCTATCAGGACATA
GCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCT
TCCTCGTGCTTTACGGTATCGCCGC
TCCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCG
GGACTCTGGGGTTCGAAATGACCGA
CCAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTC
ATTACATCTGTGTGTTGGTTTTTTGTGTGAAGATCCGCGTATGGTGCACTCTC-

Figure 7B

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA
CACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACA
AGCTGTGACCGTCTCCGGGAGCTGC
ATGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCG
TGATACGCCTATTTTTATAGGTTAA
TGTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTG
CGCGGAACCCCTATTTGTTTATTTT
TCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCT
TCAATAATATTGAAAAAGGAAGAGT
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CGAACTGGATCTCAACAGCGGTAAGA
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TGTTACCAGTGGCTGCTGCCAGTGG
CGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCG
CAGCGGTCGGGCTGAACGGGGGGTT
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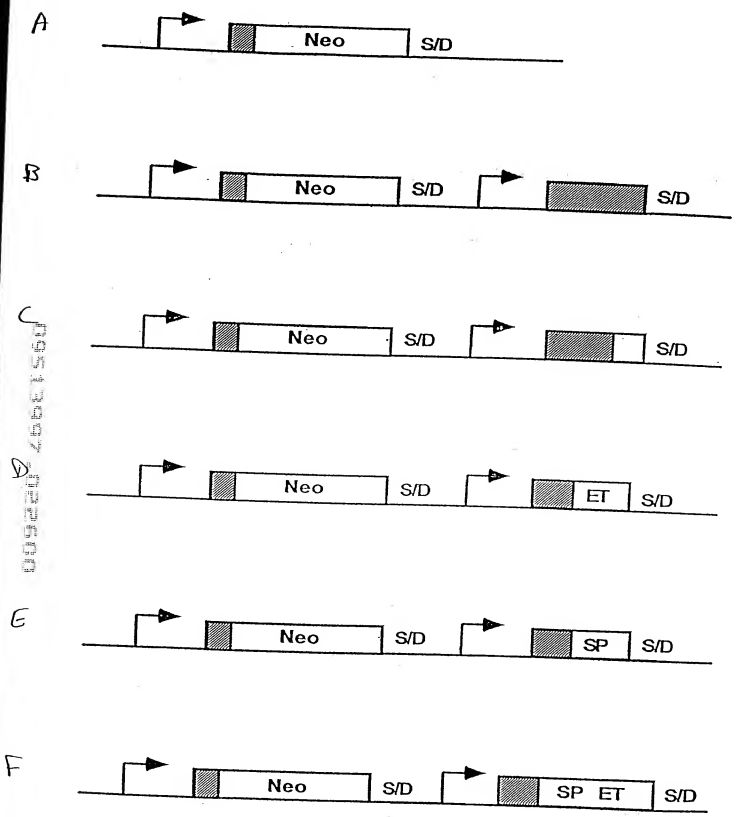
Figure 7C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F
Neo
S/D
SP ET
S/D

FIGURE 8

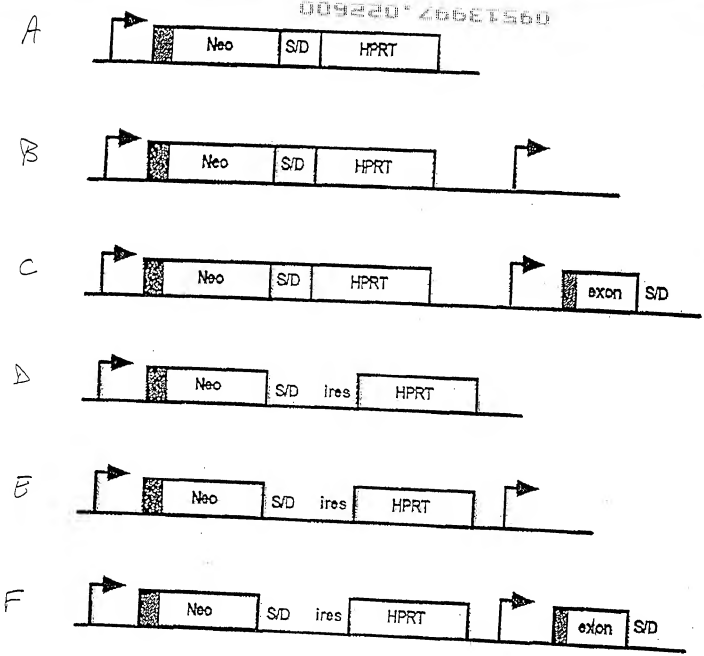

FIGURE 9

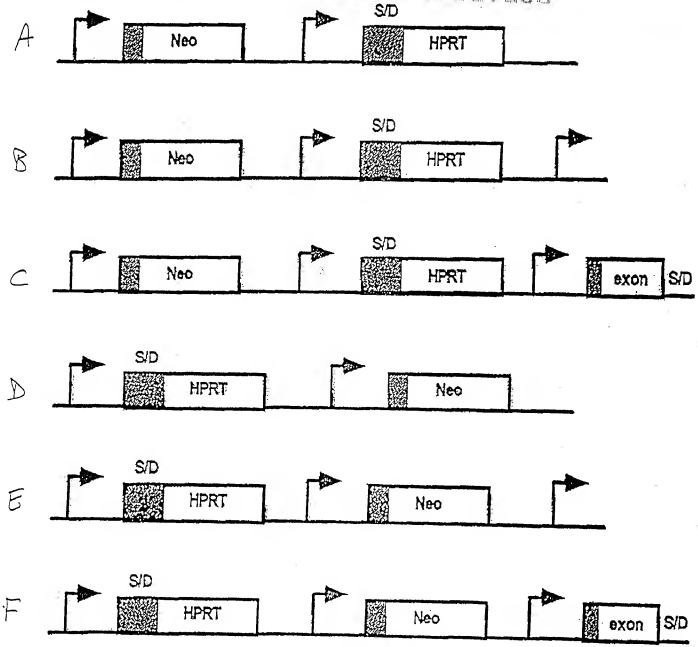

FIGURE 10

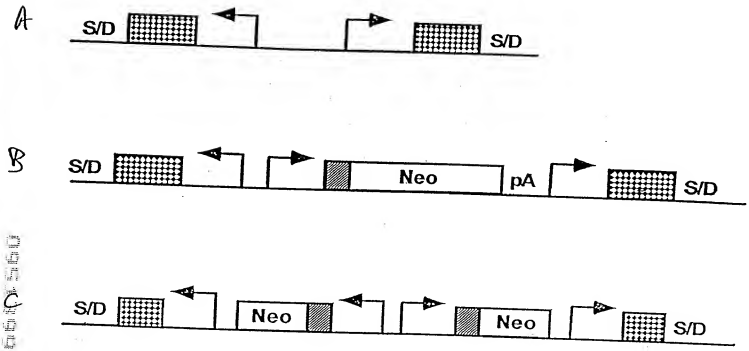

FIGURE 11

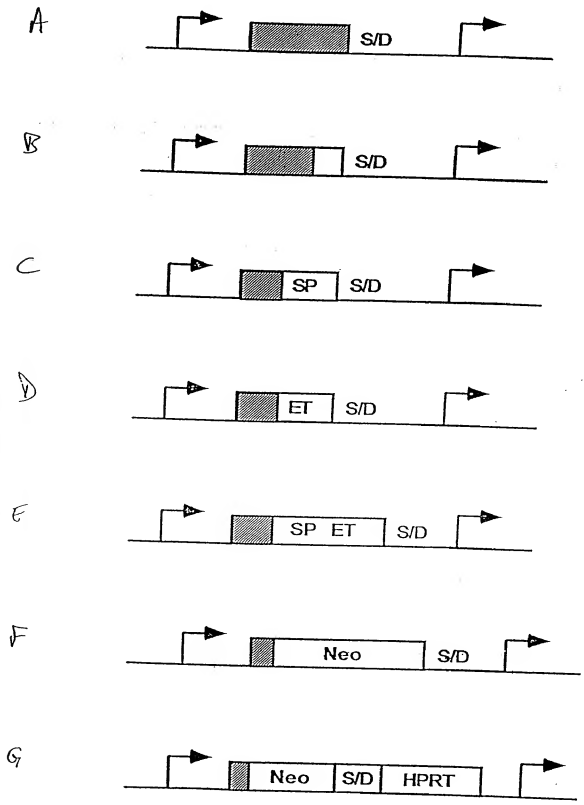

FIGURE 12

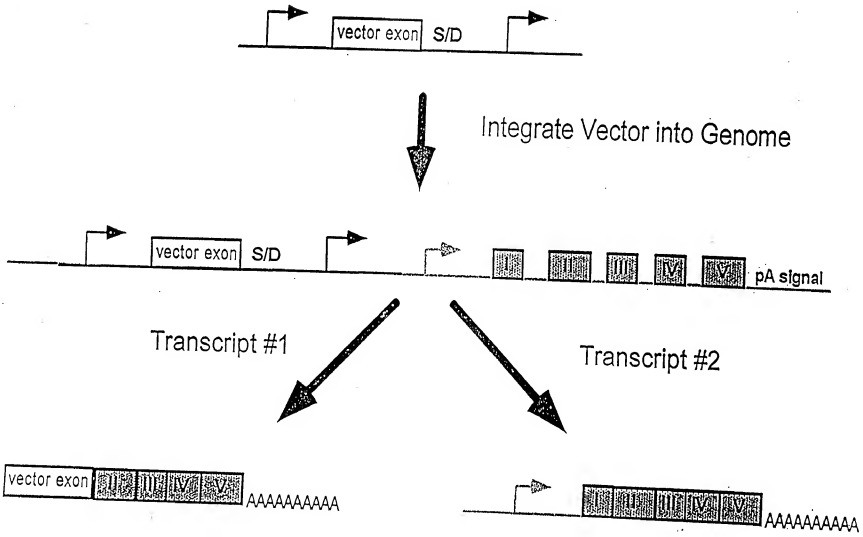

FIGURE 13

FIGURE 14A

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AGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTTGATTCTTCTGACA
CAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGCAGGTT
CTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGC
TCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGAC
CTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCACGAC
GGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATT
GGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCA
AGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATG
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GACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
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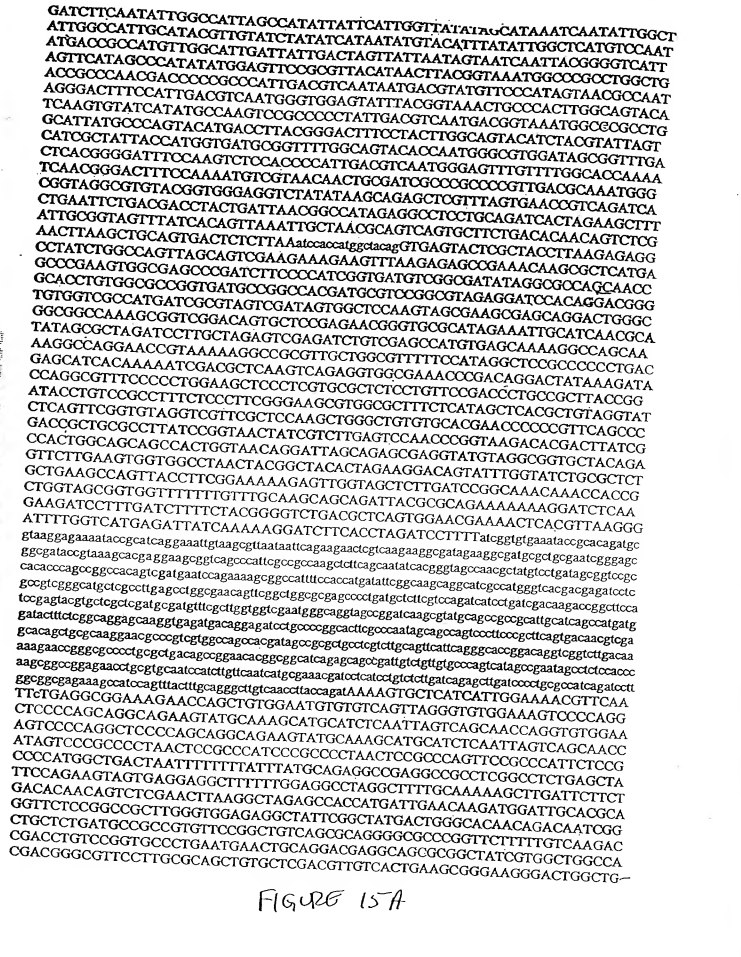
FIGURE 14B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CTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGAC
CGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGGCCA
CGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTG—

FIGURE 15A

CTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTA
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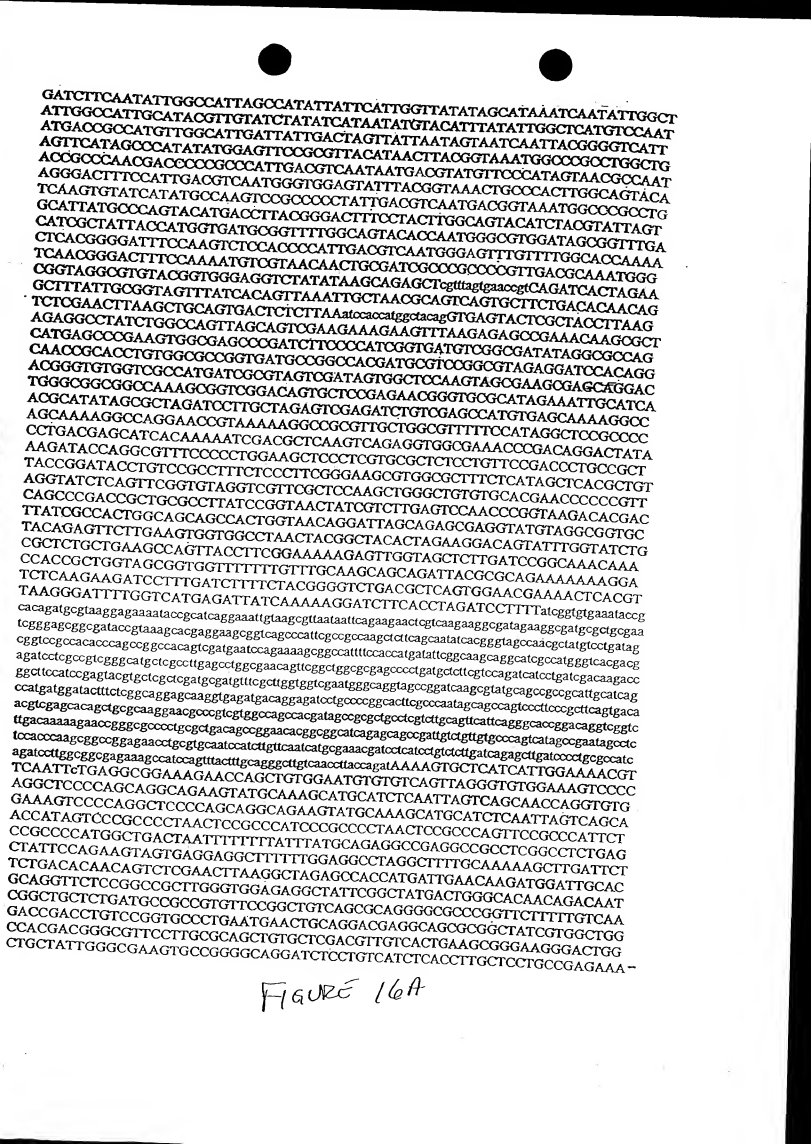
FIGURE 15B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GAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCA
ACCATAGTCCCGCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCT
CCGCCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAG
CTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTTGATTCT
TCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCAC
GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAGACAAT
CGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAA
GACCGACCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGG
CCACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGG
CTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAA

FIGURE 16A

GTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGA
TCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCGCCAGGCTCA
AGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGACCCATGGCGATGCCTGCTTGCCGAAT
ATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGTGTGGCGGAC
CGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGC
TGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTCGCAGCGCATCGCCTTCTATCGC
CTTCTTGACGAGccaTTCtgctggatggCTacAGGTcgcagccctggcgtcgtgattagtgatgatgaaccaggttatgaccttgattta
ttttgcatacctaatcattatgctgaggattttggaaagggtgtttattcctcatggactaattatggacaggactgaacgtcttgctcgagatgtgatgaaggag
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gatccattcctatgactgtagattttatcagactgaagagctattgtaatgaccagtcaacagggacataaaagtaattggtggagatgatctctcaacttta
actggaaagaatgtcttgattgtggaagatataattgacactggcaaaacaatgcagacttgcttcctttggtcaggcagtataatccaaagatggtcaagg
tcgcaagcttgctggtgaaaaggacccccagcagaagtgttggatataagccagactttgttggatttgaaattccagacaagtttgttgtaggatatgccctga
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CCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGA
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CGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 16B

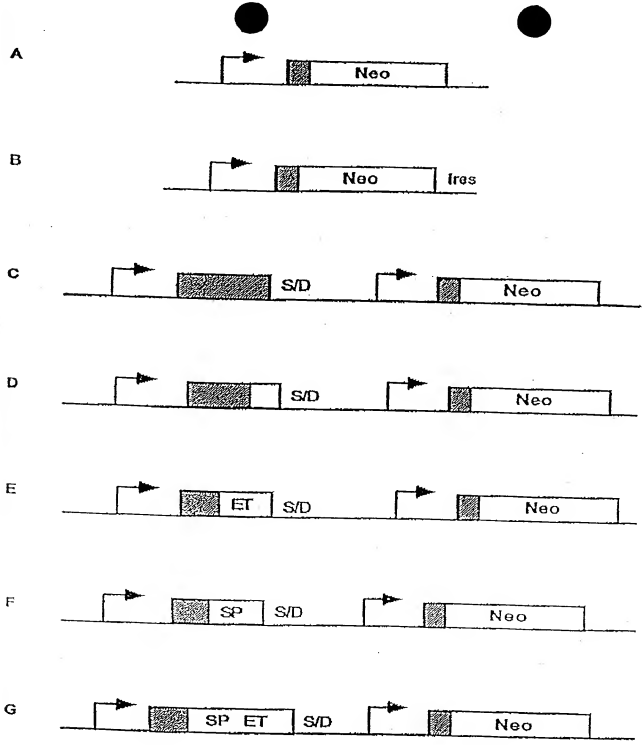

A
Neo
B
Neo
Ires
C
S/D
Neo
D
S/D
Neo
E
ET
S/D
Neo
F
SP
S/D
Neo
G
SP ET
S/D
Neo

Figure 17

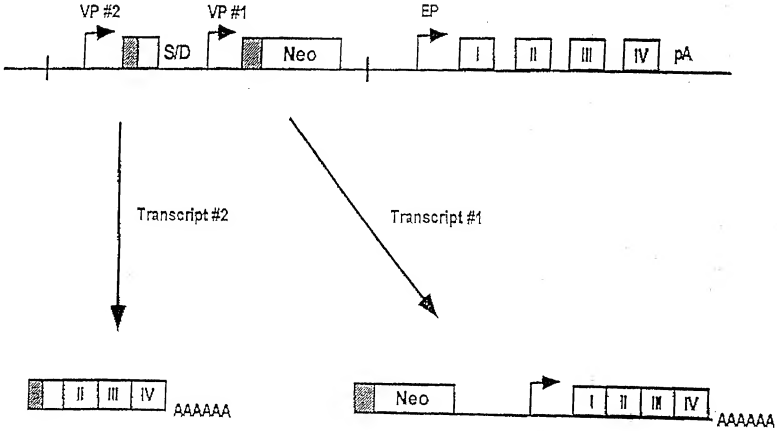


Figure 18

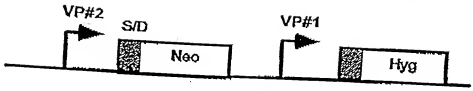


Figure 19

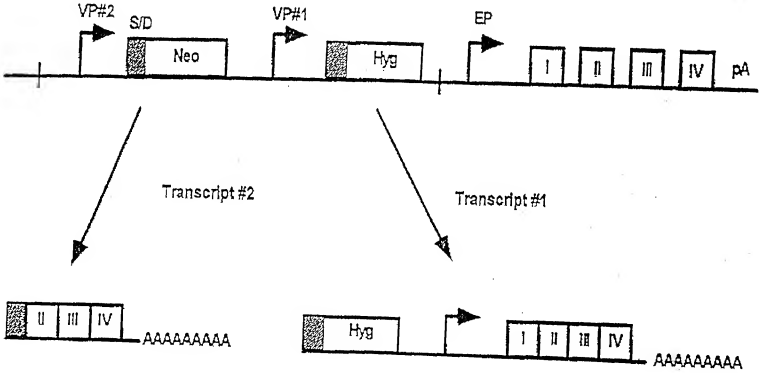


Figure 20A

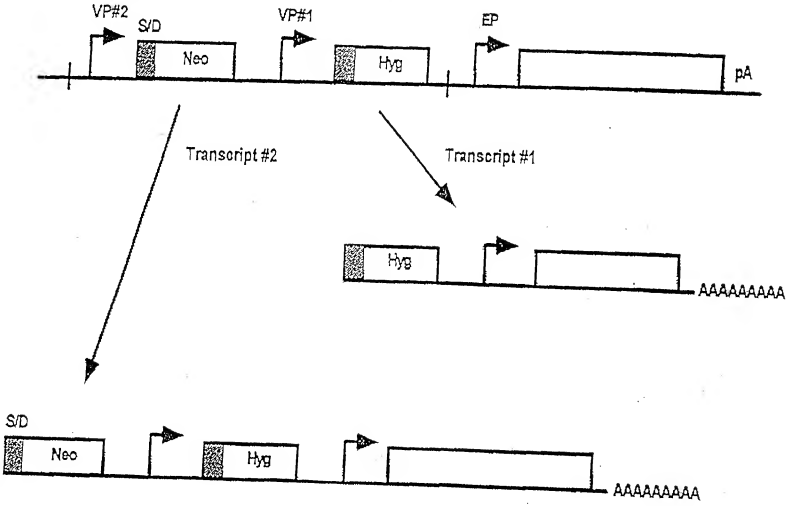


Figure 20B

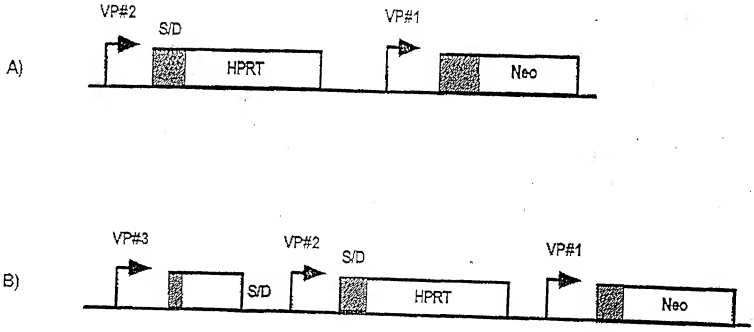


Figure 21

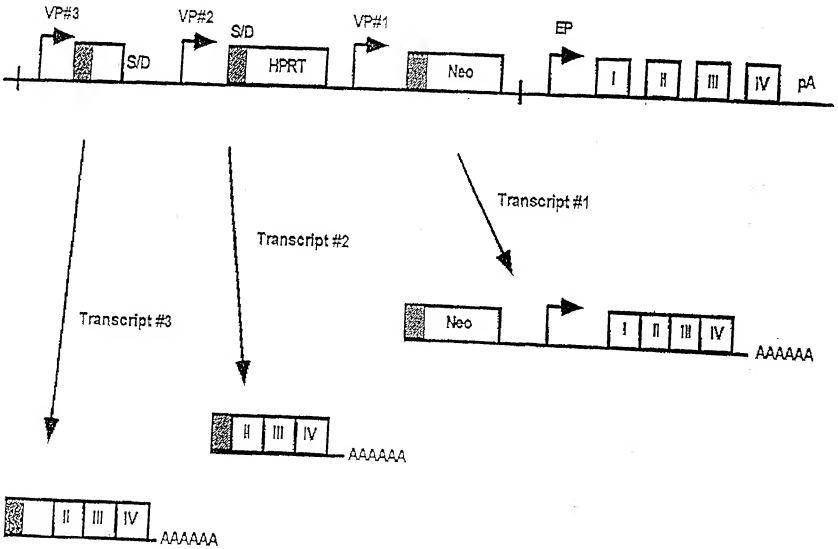
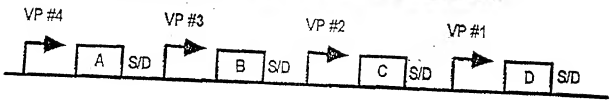
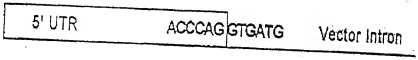


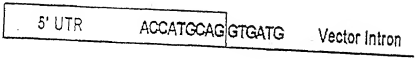
Figure 22



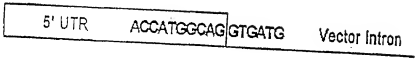
A) Exon A and Flanking Intron



B) Exon B and Flanking Intron



C) Exon C and Flanking Intron



D) Exon D and Flanking Intron

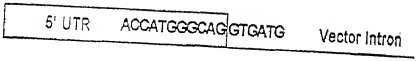


Figure 23

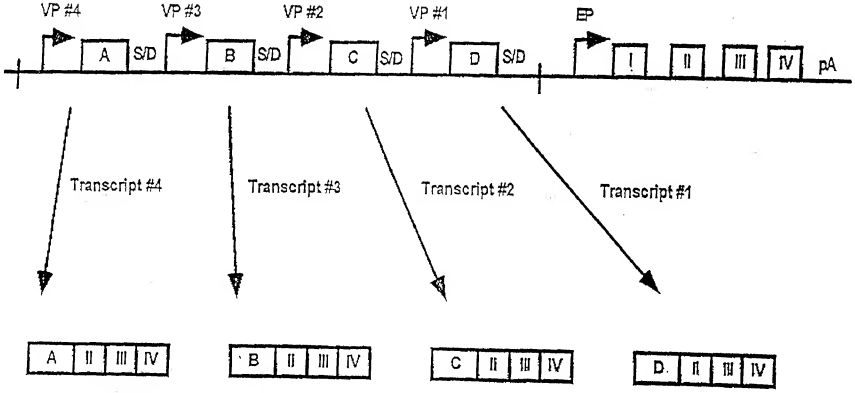


Figure 24

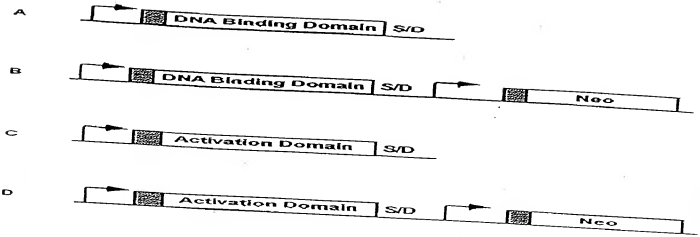

A
DNA Binding Domain
S/D
B
DNA Binding Domain
S/D
Neo
C
Activation Domain
S/D
D
Activation Domain
S/D
Neo

FIGURE 25

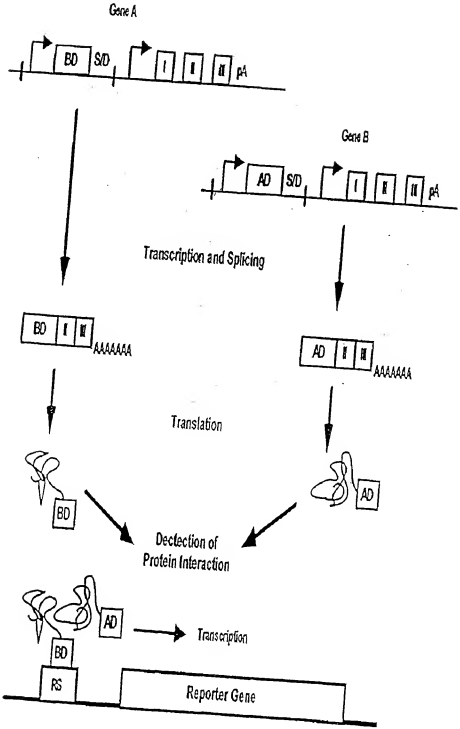

Gene A
BD
S/D
I
II
III
pA
Gene B
AD
S/D
I
II
III
pA
Transcription and Splicing
BD
I
III
AAAAAAA
AD
II
III
AAAAAAA
Translation
BD
AD
Dectection of
Protein Interaction
AD
BD
Transcription
RS
Reporter Gene

FIGURE 26

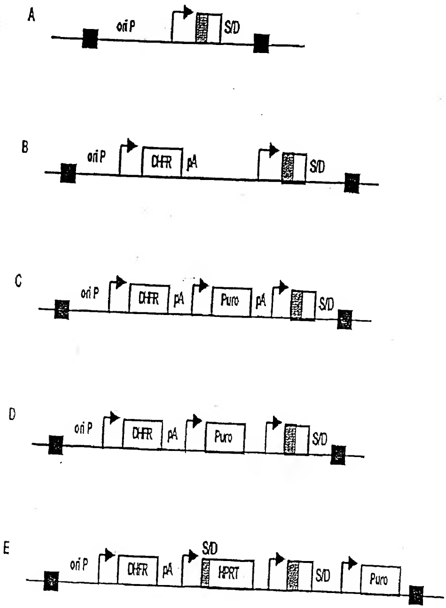


FIGURE 27

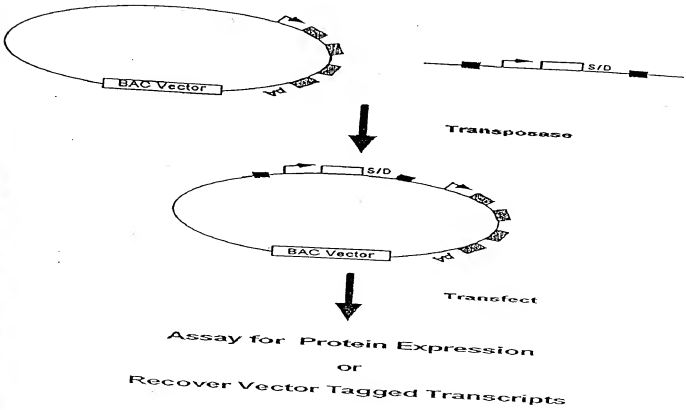

BAC Vector
S/D
Transposase
S/D
BAC Vector
Transfect
Assay for Protein Expression
or
Recover Vector Tagged Transcripts

FIGURE 28

CACCTAAATTGTAAGCGTTAATATTTTGTTAAAATTCGCGTTAAATTTTTGT
TAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTAT
AAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAA
CAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAA
CCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCTAATCAAGTT
TTTTGGGGTCGAGGTGCCGTAAAGCACTAAATCGGAACCCTAAAGGGAGC
CCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAAAGGA
AGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCG
GTCACGCTGCGCGTAACCACCACACCCGCCGCGCTTAATGCGCCGCTACAG
GGCGCGTCCCATTCGCCATTCAGGCTGCGCAACTGTTGGGAAGGGCGATC
GGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTG
CAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCCAGTCACGACGTTGTA
AAACGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCGAATTGGGT
ACaattcaattcgtcgacctcgaaattctaccgggtaggggaggcgcttttcccaaggcagtctggagcatgcgctttag
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gttcccggctggccgcgcagcaacagatggaaggcctcctggccgccgcaccgggcccaaggagcccgcgtggttcctt
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cggccgagcgcgccgggtgcccgccttcctggagacctccgcgccccgcaacctccccttctacgagcggctcggctt
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ATAAATCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAAT
ATGTACATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGA
TTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGC
CCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGC
TGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCC
ATAGTAACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTA
CGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCG
CCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAG
TACATGACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTC
ATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCTACGTATTAGTC
TAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAAT
GGGAGTTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAAC
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TGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGA
AGCTTTATTGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGTGCT
TCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTtaattaaccaccgctac
aggtgagtactcgGATCTGCTACCTTAAgagaggcctatctggccagttagcagtcgaagaaagaagtttaa
GAGAGCCGAAACAAGCGCTCATGAGCCCGAAGTGGCGAGCCCGATCTTCC
CCATCGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCC-

FIGURE 29A

GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTG
TGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGC
AGGACTGGGCGGCGGCCAAAGCGGTCGGACAGTGCTCCGAGAACGGGTGC
GCATAGAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAG
GCCGCCACCGCGGTGGAGCTCCAGCTTTTGTTCCCTTTAGTGAGGGTTAAT
TTCGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTA
TCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAAG
CCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAC
TGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCG
GCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCGCTCTTCCGCTTCCT
CGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAG
CTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA
GGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAA
AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCCTGACGAGCATC
ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAA
AGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCG
ACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTG
GCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTT
CGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGC
GCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA
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AAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACT
CACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGA
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CGATCTGTCTATTTCGTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGAT
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CGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCA
GTCTATTAATTGTTGCCGGGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAG
TTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACGCTCGTC
GTTTGGTATGGCTTCATTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTAC
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CGTTGTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGC
ACTGCATAATTCTCTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACT
GGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAG
TTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAAC
TTTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAACTCTCAAG
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CTGATCTTCAGCATCTTTTACTTTCACCAGCGTTTCTGGGTGAGCAAAAAC
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TGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTT
ATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAA
TAGGGGTTCCGCGCACATTTCCCCGAAAAGTGC

Figure 29B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG
GTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTG
CGATCGCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCATAGAGGCCTCCTGCAGAACTGTCTTAGTG
ACAACTATCGATTTCCACACATTATACGAGCCGATGTTAATTGTCAACAGC
TCATGCATGACGTCCCGGGAGCAGACAAGCCCGACCATGGCTCGAGTAAT
ACGACTCACTATAGGGCGACAGGTGAGTACTCGCTACCTTAAggcctatctggccg
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FIGURE 30A

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AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA
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CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCT
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CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC
GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 30B

TTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGAT
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AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
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CCATGGGTCACGACGAGATCCTCGCCGTCGGGCATGCTCGCCTTGAGCCTG
GCGAACAGTTCGGCTGGCGCGAGCCCCTGATGCTCTTCGTCCAGATCATCC
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GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 30C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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FIGURE 31A

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GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
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FIGURE 31B

TTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAA
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gggcgggctcaggggcggggcgggcgcccgaaggtcctccggaggcccggcattctgcacgcttcaaaagcgcacgt
ctgccgcgctgttctcctcttcctcatctccgggcctttcgacctgcatccatctagatctcgagcagctgaagcttaccatga
ccgagtacaagcccacggtgcgcctcgccacccgcgacgacgtccccgggccgtacgcaccctcgccgccgcgttcg
ccgactaccccgccacgcgccacaccgtcgacccggaccgccacatcgagcgggtcaccgagctgcaagaactcttcct
cacgcgcgtcgggctcgacatcggcaaggtgtgggtcgcggacgacggcgccgcggtggcggtctggaccacgccg
gagagcgtcgaagcgggggcggtgttcgccgagatcggcccgcgcatggccgagttgagcggttcccggctggccgc
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gtcttcgcccgaccaccagggcaagggtctggcaagcgccgtcgtgctccccggagtggaggcggccgagcgcgccg
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gcgcccgaccgaaaggagcgcacgaccccatgcatcgatggcactgggcaggtaagtatcaaggttagcGGCCGC
TAACCTGGTTGCTGACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCT
GGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACAGCTGG
TTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTT
GTTAAAATTCGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAG
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 3/C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG
GTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTG
CGATCGCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCAGATCTAAGCTAGCGCCGCCACCATGGGCC
CTAAAAAGAAGCGTAAAGTCGCCCCCCCGACCGATGTCAGCCTGGGGGAC
GAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCGCATGCCGACGCGCT
AGACGATTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGGCCGG
GATTTACCCCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACT
TCGAGTTTGAGCAGATGTTTACCGATGCCCTTGGAATTGACGAGTACGGTG
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aacgccatttgaccattcaccacattggtgtgcacctccaagctgggtaccagcgtctgcgtctgagacgcgtgatttcctt
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tgatcttatttccattatggtgaaagttggaacctcttacgtgccgatcaacgtctcattttcgccaaaTTAATTAAGG
CGCGCCgctctcctggctaggagtcacgtagaaaggactaccgacgaaggaacttgggtcgccggtgtgttcgtat-

FIGURE 32A

atggaggtagtaagacctccctttacaacctaaggcgaggaactgcccttgctattccacaatgtcgtcttacaccattgagt
cgtctcccctttggaatggcccctggacccggcccacaacctggcccgctaagggagtccattgtctgttatttcatggtctt
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GTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGACTGGGCGGCGGCCAA
AGCGGTCGGACAGTGCTCCGAGAACGGGTGCGCATAGAAATTGCATCAAC
GCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCTGTCGAGCCATGTGAG
CAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCG
TTTTTCCATAGGCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCA
AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC
CCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGG
ATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCA
CGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGCTGGGCTGT
GTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTAT
CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC
ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT-

FIGURE 32B

TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTA
TCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTT
GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTTTGCAAGC
AGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT
CTACGGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTG
GTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTATCGGTGTGA
AATACCGCACAGATGCGTAAGGAGAAAATACCGCATCAGGAAATTGTAAG
CGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGATAGAAGGCGATGCGC
TGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGGAAGCGGTCAGCCCA
TTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCCAACGCTATGTCCTG
ATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATGAATCCAGAAAAGC
GGCCATTTTCCACCATGATATTCGGCAAGCAGGCATCGCCATGGGTCACGA
CGAGATCCTCGCCGTCGGGCATGCTCGCCTTGAGCCTGGCGAACAGTTCGG
CTGGCGCGAGCCCCTGATGCTCTTCGTCCAGATCATCCTGATCGACAAGAC
CGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGTTTCGCTTGGTGGT
CGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCGCCGCATTGCATCA
GCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAGATGACAGGAGATC
CTGCCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTCCCGCTTCAGTGAC
AACGTCGAGCACAGCTGCGCAAGGAACGCCCGTCGTGGCCAGCCACGATA
GCCGCGCTGCCTCGTCTTGCAGTTCATTCAGGGCACCGGACAGGTCGGTCT
TGACAAAAAGAACCGGGCGCCCCTGCGCTGACAGCCGGAACACGGCGGCA
TCAGAGCAGCCGATTGTCTGTTGTGCCCAGTCATAGCCGAATAGCCTCTCC
ACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTGTTCAATCATGCGA
AACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCCCCTGCGCCATCAG
ATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCAGGGCTTGTCAACC
TTACCAGATAAAAGTGCTCATCATTGGAAAAcattcaattcgtcgacctcgaaatttctaccggg
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ctctggcctcgcacacattccacatccaccggtaggcgccaaccggctccgttctttggtggcccctcgcgccaccttcta
ctcctccctagtcaggaagttcccccccgccccgcanctcgcgtcgtgcaggacgtgacaaatggaaatagcacgtctc
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gcgggcgcccgaaggtcctccggaggcccggcattctgcacgcttcaaaagcgcacgtctgccgcgctgttctcctcttc
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gcgcctcgccacccgcgacgacgtccccgggccgtacgcaccctcgccgccgcgttcgccgactaccccgccacgcg
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gcgcacctggtgcatgacccgcaagcccggtgcctgacgcccgccccacgacccgcagcgcccgaccgaaaggagcg
cacgaccccatgcatcgatggcactgggcaggtaagtatcaaggttagcGGCCGCTAACCTGGTTGCT
GACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGG
GACTTTCCACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTC
AGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTTAAAATTCGCG
TTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGC
AAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTT
CCAGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAA
GGGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 32C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG
GTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTG
CGATCGCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCAGATCTAAGCTAGCTTCCTGAAAGATGAAG
CTACTGTCTTCTATCGAACAAGCATGCGATATTTGCCGACTTAAAAAGCTC
AAGTGCTCCAAAGAAAAACCGAAGTGCGCCAAGTGTCTGAAGAACAACTG
GGAGTGTCGCTACTCTCCCAAAACCAAAAGGTCTCCGCTGACTAGGGCACA
TCTGACAGAAGTGGAATCAAGGCTAGAAAGACTGGAACAGCTATTTCTACT
GATTTTTCCTCGAGAAGACCTTGACATGATTTTGAAAATGGATTCTTTACA
GGATATAAAAGCATTGTTAACAGGATTATTTGTACAAGATAATGTGATAATA
AGATGCCGTCACAGATAGATTGGCTTCAGTGGAGACTGATATGCCTCTAAC
ATTGAGACAGCATAGAATAAGTGCGACATCATCATCGGAAGAGAGTAGTA
ACAAAGGTCAAAGACAGTTGACTGTATCGCCGGAATTCAGGTGAGTACTC
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FIGURE 33A

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GAGAACGGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGATCCT
TGCTAGAGTCGAGATCTGTCGAGCCATGTGAGCAAAAGGCCAGCAAAAGG
CCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC
CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTG
CGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCC
CTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGT-

FIGURE 33B

TCGGTGTAGGTCGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTT
CAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCG
GTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAG
CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTA
ACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGC
CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
CCGCTGGTAGCGGTGGTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAA
AAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC
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AGGATCTTCACCTAGATCCTTTTATCGGTGTGAAATACCGCACAGATGCGT
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taagtatcaaggttagcGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGAC
ACACATTCCACAGCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATT
GTAAGCGTTAATATTTTGTTAAAATTCGCGTTAAATTTTTGTTAAATCAGC-

FIGURE 33C

TCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAA
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCC
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC
AGGGCGATGGCCCAC

FIGURE 33D

tcaacgacaggagcacgatcatgcgcacccgtggccaggacccaacgctgcccgagatgcgccgcgtgcggctgctgg
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FIGURE 34A

actgagggtaatttgtcacagttttgctgtttccttcagcctgcatggatttttctatacttttgaactgtaatttttaaggaagc
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FIGURE 34B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG
GTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
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CGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGA
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FIGURE 35A

ggtcttgacaaaaagaaccgggcgcccctgcgctgacagccggaacacggcggcatcagagcagccgattgtctgttgt
gcccagtcatagccgaatagcctctccacccaagcggccggagaacctgcgtgcaatccatcttgttcaatcatgcgaaac
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GCGGAAAGAACCAGCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCC
CCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCA
GCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCA
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CATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCCATGGCTG
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ATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAA
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ATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAG
GCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGC
CGTGTTCCGGCTGTCAGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGA
CCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGT
GGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTG
AAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTC
CTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCA
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AAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAA
AATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTTCC
AGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAG
GGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 35B

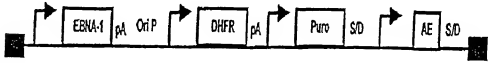

FIGURE 36

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
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GTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTG
CGATCGCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCATAGAGGCCTCCTGCAGAACTGTCTTAGTG
ACAACTATCGATTTCCACACATTATACGAGCCGATGTTAATTGTCAACAGC
TCATGCATGACGTCCCGGGAGCAGACAAGCCCGACCATGGCTCGAGTAAT
ACGACTCACTATAGGGCGACAGGTGAGTACTCGCTACCTTAAggcctatctggccg
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FIGURE 37A

agcccgctcctacctgcaatatcagggtgactgtgtgcagctttgacgatggagtagatttgcctccctggtttccacctatg
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AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA
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CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCT
CCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCT
TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGC
CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC
GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 37B

TTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
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AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
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GGGCTTGTCAACCTTACCAGATAAAAGTGCTCATCATTGGAAAAcattcaattcgt
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GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 37C